#2

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/987,967

DATE: 11/21/2001 TIME: 10:25:14

Input Set : A:\PF268D1C1SEQLIST.txt
Output Set: N:\CRF3\11212001\1987967.raw



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c>	9	<140	> CII	RREN	T AP	PLIC	ATIO	N NU	MBER	: US	/09/	987,	967					
C>	9	<141	> CU	RREN	T FI	LING	DAT	E: 2	001-	11-1	6							
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	44	ctca	acca	ica c	gacta	cact	t go	tgaa	ctg	cto	ctgg	gggc	c at	g ag	rg ct	ig to	ca ctg	56
	45			_									Me	et Ar	g Le	eu Se	er Leu	
	46														_	20		
	48	cca	ctg	ctg	ctg	ctg	ctg	ctg	gga	gcc	tgg	gcc	atc	cca	ggg	ggc	ctc	104
	49	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Gly	Ala	\mathtt{Trp}	Ala	Ile	Pro	Gly	Gly	Leu	
	50			-15					-10					- 5				150
	52	ggg	gac	agg	gcg	cca	ctc	aca	gcc	aca	gcc	cca	caa	ctg	gat	gat	gag	152
	53	Gly	Asp	Arg	Ala	Pro		Thr	Ala	Thr	Ala	Pro	GIn	Leu	Asp	Asp	GIU	
		-1					5					10		L.L		~~~	15	200
	56	gag	atg	tac	tca	gcc	cac	atg	ccc	gct	cac	ctg	cgc	tgt	gat	315	Cyro	200
		Glu	Met	Tyr	Ser		His	Met	Pro	Ala	11S	Leu	Arg	Cys	Asp	30	Cys	
	58					20			.			ata	~~~	220	aca		acc	248
	60	aga	gct	gtg	gct	tac	cag	atg Mo+	Tgg	Cdd	Acr	T.e.	y Ca Ala	Luc	y Ca Ala	Glu	Thr	240
		Arg	Ala	vaı	A1a 35	ryr	GTIJ	met	ттр	40	HSII	₽eu	VIG	шуз	45	OIU	- 111	
	62	aaa	~++	as+		+ ==	220	tat	aaa		כממ	COO	gaa	cta		σασ	tta	296
	04 65	aaa Lys	CCC	Cac	acc Th∞	Cor	Aer	Ser	999 999	999 999	Ara	Ara	Glu	Len	Ser	Glu	Leu	
	05	гàг	ьeu	HIS	THE	Ser	MOII	Set	GTĀ	GTÄ	ату	21.9	JIU	204			- - -	

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Input Set : A:\PF268D1C1SEQLIST.txt
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66	gtc	+20		at	atc	cta	gac		aac	tac	tee	caa		taa	caq	qac	344
60	Val	Tur	Thr	Agn	Val	Len	Asp	Ara	Asn	Cvs	Ser	Ara	Asn	Trp	Gln	Asp	
70		65	1111	Mop	,	Lou	70	9		-1-		75		-		-	
70	tac		att	cga	σаа	ata		caa	ata	aaa	cat	ctc	aca	qqc	cca	gga	392
72	Tyr	Glv	Val	Ara	Glu	Val	Asp	Gln	Val	Lvs	Arq	Leu	Thr	Gly	Pro	Gly	
	80	GIY	V U I	my	014	85	1105	0		-1-	90			-		95	
	ctt	age	πασ	ασα	cca		cca	aσc	atc	agc	ata	atq	qtc	aca	qqq	ggc	440
70	Leu	Ser	Glu	Glv	Pro	Glu	Pro	Ser	Ile	Ser	Val	Met	val	Thr	Gly	Gly	
78	пеа	ber	OIU	011	100					105					110	_	
80	ccc	†aa	cct	acc		ctc	tcc	agg	aca	tqt	ttg	cac	tac	ttg	ggg	gag	488
81	Pro	Trp	Pro	Thr	Ara	Leu	Ser	Arq	Thr	Cys	Leu	His	Tyr	Leu	Gly	Glu	
82	110			115	5			,	120	•			-	125	_		
84	ttt	σσα	σаа		caσ	atc	tat	σaa	qcc	cac	caa	caa	ggc	cga	ggg	gct	536
85	Phe	Glv	Glu	Asp	Gln	Ile	Tvr	Glu	Ãla	His	Gln	Gln	Gly	Arg	Gly	Ala	
86	1110	O-1	130	E			- 1	135					140	_			
88	ctg	σασ		tta	cta	tat	aaa	qqa	ccc	cag	ggg	gcc	tgc	tca	gag	aag	584
89	Leu	Glu	Ala	Leu	Leu	Cvs	Gly	Gly	Pro	Gln	Gly	Āla	Cys	Ser	Glu	Lys	
90	ЦСи	145				- 4 -	150	_			_	155					
92	ata		acc	aca	aσa	gaa	gag	ctc	tagi	tcct	gga	ctcta	accct	to c	tctg	aaaga	638
	Val								-		-						
	160				_	165											
96	agct	agg	act .	tgcto	ctgad	g gt	tctc	cacto	c cc	gtct	gcag	gca	gccag	gga	gggc	aggaa	.g 698
96 agctggggct tgctctgacg gtctccactc ccgtctgcag gcagccagga gggcaggaag 698 98 cccttgctct gtgctgccat cctgcctccc tcctccagcc tcagggcact cgggcctggg 758														rg 758			
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11	3		- 2					-1	-				-1	-	_		
11	6 Ile	e Pr	o Gl	y Gl	y Lei	ı Gl	y As	p Ar	g Al	a Pr	o Le	u Th	r Al	a Th	r Al	a Pro)
11	7	- 5				-1					5					10	
12	0 G1r	. T.	_											_			
12	0 911	т пе	u As	p As	p Gl	ı Gl	u Me	t Ty:	r Se			s Me	t Pr	o Al	a Hi	s Let	1
	1				15					20					25	,	
12	1				15					20				p Gl	25 n As	s Leu n Leu	
12	1 4 Arg	д Су	s As	p Al 30	15 a Cy	s Ar	g Al	a Va	1 A1 35	20 a Ty	r Gl	n Me	t Tr	p Gl 40	25 n As	i sn Let	1
12	1 4 Arg	д Су	s As	p Al 30	15 a Cy	s Ar	g Al	a Va	1 A1 35	20 a Ty	r Gl	n Me	t Tr	p Gl 40	25 n As	,	1
12 12 12	1 4 Arg 5 8 Ala	д Су а Г у	s As s Al 45	p Al 30 a Gl	15 a Cya u Th	s Ar r Ly	g Al s Le	a Va u Hi 50	l Al 35 s Th	20 a Ty r Se	r Gl r As	n Me n Se	t Tr r Gl 55	p Gl 40 y Gl	25 n As y Ai	n Leu ng Arg	1 J
12 12 12	1 4 Arg 5 8 Ala	д Су а Г у	s As s Al 45	p Al 30 a Gl	15 a Cya u Th	s Ar r Ly	g Al s Le	a Va u Hi 50	l Al 35 s Th	20 a Ty r Se	r Gl r As	n Me n Se u As	t Tr r Gl 55 p Ar	p Gl 40 y Gl	25 n As y Ai	i sn Let	1 J
12 12 12 13	1 4 Arg 5 8 Ala 9 2 Glu	g Cy a Ly u Le 60	s As s Al 45 u Se	p Al 30 a Gl r Gl	15 a Cyr u Th u Le	s Ar r Ly u Va	g Al s Le 1 Ty 65	a Va u Hi 50 r Th	l Al 35 s Th r As	20 a Ty r Se p Va	r Gl r As l Le	n Me n Se u As 70	t Tr r Gl 55 p Ar	p Gl 40 y Gl g As	n As y Ar n Cy	in Leu ng Arg ns Sei	ı G
12 12 12 13	1 4 Arg 5 8 Ala 9 2 Glu	g Cy a Ly u Le 60	s As s Al 45 u Se	p Al 30 a Gl r Gl	15 a Cyr u Th u Le	s Ar r Ly u Va	g Al s Le 1 Ty 65	a Va u Hi 50 r Th	l Al 35 s Th r As	20 a Ty r Se p Va	r Gl r As l Le u Va	n Me n Se u As 70	t Tr r Gl 55 p Ar	p Gl 40 y Gl g As	n As y Ar n Cy	in Leu og Arg vs Sei vs Arg	1 F
12 12 12 13 13 13	1 4 Arg 5 8 Ala 9 2 Glu 3 6 Arg	g Cy a Ly Le 60 g As	s As s Al 45 u Se n Tr	p Al 30 a Gl r Gl p Gl	15 a Cy u Th u Le n As	s Ar r Ly u Va p Ty 80	g Al s Le l Ty 65 r Gl	a Va u Hi 50 r Th y Va	l Al 35 s Th r As	20 a Ty r Se p Va	r Gl r As l Le u Va 85	n Me n Se u As 70	t Tr r Gl 55 p Ar	p Gl 40 y Gl g As	n As y Ar n Cy	sn Leu rg Arg rs Sei rs Arg	1 F
12 12 12 13 13 13	1 4 Arg 5 8 Ala 9 2 Glu 3 6 Arg	g Cy a Ly Le 60 g As	s As s Al 45 u Se n Tr	p Al 30 a Gl r Gl p Gl	a Cyru Thu Le n As	s Ar r Ly u Va p Ty 80	g Al s Le l Ty 65 r Gl	a Va u Hi 50 r Th y Va	l Al 35 s Th r As	a Ty r Se p Va g Gl y Pr	r Gl r As l Le u Va 85	n Me n Se u As 70	t Tr r Gl 55 p Ar	p Gl 40 y Gl g As	n As y Ar n Cy l Ly	in Leurg Arg vs Servs Arg 90 er Val	1 F
12 12 13 13 13 13 14	1 4 Arg	g Cy a Ly 60 g As	s As s Al 45 u Se n Tr	p Al 30 a Gl r Gl p Gl y Pr	15 a Cyru Thu Le n As	s Ar r Ly u Va p Ty 80 y Le	g Als Les Les 65 r Gl	a Va u Hi 50 r Th y Va	l Al 35 s Th r As l Ar u Gl	20 a Ty r Se p Va g Gl y Pr 10	r Gl r As l Le u Va 85 o Gl	n Me n Se u As 70 1 As	t Tr r Gl 55 p Ar p Gl	p Gl 40 y Gl g As n Va	25 n As y Ar n Cy 1 Ly .e Se	on Leurg Argas Sen Sen 90 er Val	1 C J
12 12 13 13 13 14 14	1 4 Are 5 8 Ala 9 9 12 Glu 3 6 Are 5 7 75 0 Leu 1 4 Me	g Cy a Ly 60 g As	s As s Al 45 u Se n Tr	p Al 30 a Gl r Gl p Gl y Pr	a Cyau Thu Leon Associated Spin Spin Spin Spin Spin Spin Spin Spin	s Ar r Ly u Va p Ty 80 y Le	g Als Les Les 65 r Gl	a Va u Hi 50 r Th y Va	l Al 35 s Th r As l Ar u Gl	20 a Ty r Se p Va g Gl y Pr 10 ar Ar	r Gl r As l Le u Va 85 o Gl	n Me n Se u As 70 1 As	t Tr r Gl 55 p Ar p Gl	p Gl 40 y Gl g As n Va r Il	25 n As y Ar n Cy l Ly le Se 10 ar Cy	in Leurg Arg vs Servs Arg 90 er Val	1 C J
12 12 13 13 13 13 14	1 4 Are 5 8 Ala 9 9 12 Glu 3 6 Are 5 7 75 0 Leu 1 4 Me	g Cy a Ly 60 g As	s As s Al 45 u Se n Tr r Gl	p Al 30 a Gl r Gl p Gl y Pr	a Cyau Thu Leon Associated Spin Spin Spin Spin Spin Spin Spin Spin	s Ar r Ly u Va p Ty 80 y Le	g Als Les Les 65 r Gl	a Va u Hi 50 r Th y Va	l Al 35 s Th r As l Ar u Gl	20 a Ty r Se p Va g Gl y Pr 10 ar Ar	r Gl r As l Le u Va 85 o Gl	n Me n Se u As 70 1 As	t Tr r Gl 55 p Ar p Gl	p Gl 40 y Gl g As n Va	25 n As y Ar n Cy l Ly le Se 10 ar Cy	on Leurg Argas Sen Sen 90 er Val	1 C J

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DATE: 11/21/2001 TIME: 10:25:14

Input Set : A:\PF268DlC1SEQLIST.txt
Output Set: N:\CRF3\11212001\1987967.raw

148 His Tyr Leu Gly Glu Phe Gly Glu Asp Gln Ile Tyr Glu Ala His Gln 130 125 152 Gln Gly Arg Gly Ala Leu Glu Ala Leu Leu Cys Gly Gly Pro Gln Gly 150 145 156 Ala Cys Ser Glu Lys Val Ser Ala Thr Arg Glu Glu Leu 160 157 155 160 <210> SEQ ID NO: 3 161 <211> LENGTH: 28 162 <212> TYPE: DNA 163 <213> ORGANISM: Artificial Sequence 165 <220> FEATURE: 166 <221> NAME/KEY: Primer_Bind 167 <223> OTHER INFORMATION: Synthetic primer containing a Bam HI restriction site encoding a start AUG, followed by 19 nucleotides of the hHSP 168 coding sequence beginning with the first base of the 23rd codon. 169 171 <400> SEQUENCE: 3 28 172 cgcggatccg acagggcgcc actcacag 175 <210> SEQ ID NO: 4 176 <211> LENGTH: 30 177 <212> TYPE: DNA 178 <213> ORGANISM: Artificial Sequence 180 <220> FEATURE: 181 <221> NAME/KEY: Primer_Bind 182 <223> OTHER INFORMATION: Synthetic primer containing an Xba I restriction site followed by 21 nucleotides complementary to the last 21 nucleotides of hHSP including the stop codon. 184 186 <400> SEQUENCE: 4 30 187 gcgtctagag aggtcactgg gttttatttg 190 <210> SEQ ID NO: 5 191 <211> LENGTH: 34 192 <212> TYPE: DNA 193 <213> ORGANISM: Artificial Sequence 195 <220> FEATURE: 196 <221> NAME/KEY: Primer_Bind 197 <223> OTHER INFORMATION: Synthetic primer containing a Bam HI restriction site followed by 19 bases of the sequence of hHSP. 200 <400> SEQUENCE: 5 34 201 cgcggatccg ccatcatgag gctgtcactg ccac 204 <210> SEQ ID NO: 6 205 <211> LENGTH: 30 206 <212> TYPE: DNA 207 <213> ORGANISM: Artificial Sequence 209 <220> FEATURE: 210 <221> NAME/KEY: Primer_Bind 211 <223> OTHER INFORMATION: Synthetic primer containing an Xba I restriction site followed by nucleotides complementary to the last 21 nucleotides of 212 hHSP including the stop codon. 213 215 <400> SEQUENCE: 6

11/21/01

30

216 gcgtctagag aggtcactgg gttttatttg

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/987,967

DATE: 11/21/2001 TIME: 10:25:14

34

Input Set : A:\PF268D1C1SEQLIST.txt

Output Set: N:\CRF3\11212001\I987967.raw

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- 220 <211> LENGTH: 34
- 221 <212> TYPE: DNA
- 222 <213> ORGANISM: Artificial Sequence
- 224 <220> FEATURE:
- 225 <221> NAME/KEY: Primer_Bind
- 226 <223> OTHER INFORMATION: Synthetic primer containing a Bam HI site, an AUG start codon
 - 227 and 16 nucleotides thereafter.
 - 230 <400> SEQUENCE: 7
 - 231 cgcccatccg ccatcatgag gctgtcactg ccac
 - 234 <210> SEQ ID NO: 8
 - 235 <211> LENGTH: 57
 - 236 <212> TYPE: DNA
 - 237 <213> ORGANISM: Artificial Sequence
 - 239 <220> FEATURE:
 - 240 <221> NAME/KEY: Primer_Bind
 - 241 <223> OTHER INFORMATION: Synthetic primer containing an Xba I site, a stop codon,
 - 9 codons forming hemaglutinin tag and 18 bp of 3' coding sequence.
 - 244 <400> SEQUENCE: 8
 - 245 cgctctagat caagcgtagt ctgggacgtc gtatgggtag agctcttctt ctgtggc 57

VERIFICATION SUMMARY

DATE: 11/21/2001 PATENT APPLICATION: US/09/987,967 TIME: 10:25:15

Input Set : A:\PF268DlC1SEQLIST.txt
Output Set: N:\CRF3\l1212001\l987967.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date